

Appl. No. 10/033,258
Amdt. Dated Oct. 7, 2003
Reply to Office Action of July 8, 2003

Amendments to the Specification

Please amend the specification as follow:

[0013] Figure 4 is ~~a perspective~~ an isometric view of an optic switch constructed in accordance with the present invention, with a cover of the optic switch removed to show inside details;

[0016] Figure 7 is similar to Figure 6, but showing the condition before the switching operation is ~~not~~ taken.

[0017] With reference to the drawings and in particular to Figures 4 and 5, an optic switch constructed in accordance with the present invention comprises a casing 10 and a cover 20 attached to the casing 10 to define a substantially sealed interior space therebetween for accommodating movable and fixed parts of the optic switch. The casing 10 is substantially rectangular and defines first, second, third, fourth holes 101, 102, 103, 104 in four corners thereof whereby the first and second holes 101, 102 are substantially aligned with each other and the third and fourth holes 103, 104 are substantially aligned to with each other.

[0020] Each of the optic input and output devices 30, 40, 50, 60 comprises a fiber 31 (first input fiber), 41 (first output fiber), 51 (second input fiber), 61 (second output fiber) attached to a capillary 32, 42, 52, 62 and a collimating lens 33, 43, 53, 63 attached to an end of the capillary 32, 42, 52, 62. The collimating lenses 33, 43, 53, 63 can be a GRIN lens attached to the capillaries 32, 42, 52, 62 by epoxy based adhesives. The collimating lenses 33, 43, 53, 63 are respectively received and retained in the bores 107, 108, 109, 110 defined in the internal walls

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105, 106 with the collimating lenses 33, 53 of the first and second input fibers 31, 41 precisely and respectively aligned with the collimating lenses 43, 63 of the first and second output fibers 41, 61 whereby a first optic path is formed between the first input fiber 31 of the first input device 30 and the first output fiber 41 of the first output device 40. Similarly, a second optic path is formed between the second input fiber 51 of the second input device 50 and the second output fiber 61 of the second output device 60, as shown in Figure 7. The optic paths intersect.

[0023] The movable reflection device 70 comprises reflectors having first and second reflective surfaces 71, 72 and fixed in a retainer 911. Preferably, the first and second reflective surfaces 71, 72 are parallel to each other. An arm 91 extends from the retainer 911 and is coupled to a driving device 90 for moving the movable reflection device 70 into/out of the optic paths between the input devices 30, 50 and the output devices 40, 60. The driving device 90 may be any known means, such as a relay and solenoid. The movable reflection device 70 is, thus, movable between an engaged position (Figure 6) and a non-engaged position (Figure 7). A stop 912 is formed inside the casing 10 for stopping the movement of the movable reflection device 70 from the non-engaged position to the engaged position so as to precisely position the movable reflection device 70 in the engaged position.